

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 3-6, 8, and 9 are pending in this application. Claims 1, 4-6, and 8-9 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. patent 6,628,584 to Heemskerk et al. (herein "Heemskerk") in view of U.S. patent 5,901,127 to Sako et al. (herein "Sako") and further in view of U.S. patent 6,912,191 to Suzuki. Claim 3 was rejected under 35 U.S.C. §103(a) as unpatentable over Heemskerk in view of Sako and Suzuki as applied to claims 1, 2, 4-6, and 8-9, and further in view of U.S. patent 6,256,276 to Kobayashi et al. (herein "Kobayashi"). Those rejections are traversed by the present response as discussed next.

Each of the independent claims is amended by the present response to clarify features recited therein. Specifically, the claims clarify features as discussed in the present specification at page 18, line 20, to page 23, line 13. That disclosure in the present specification is directed to features of a scrambling operation performed on main data and linking data. Independent claim 1 now clarifies the track is divided into 32-bit physical sector numbers, and each of blocks recorded in a main data area and a linking area are scrambled by a random sequence scrambling data:

...of 8-bit scrambling bytes generated by an identical system including a 16-bit shift register being loaded with an initial value and generating the 8-bit scrambling bytes by taking an initial 8-bits in the shift register as a first scrambling byte and performing an 8-bit shift to generate subsequent scrambling bytes from the initial 8-bits of the shift register[.]

Independent claim 1 now also clarifies "a 15-bit cluster number at least one of the 32-bit physical sector numbers and the data track and a bit of value 1 is preset as the initial value". The other independent claims are similarly amended as in independent claim 1 noted above.

With reference to Figure 2 in the present specification and the portion in the specification describing Figure 2, in the claims as written both of a main data and linking data are subject to a scrambling in a 16-bit shift register, which is loaded with an initial value and

that generates 8-bit scrambling bytes by taking an initial 8-bits S0-S7 in the shift register as a first scrambling byte SCB0 and performing an 8-bit shift to generate subsequent scrambling bytes SCB1-SCB309 from the initial 8-bits S0-S7 of the shift register.

Further, a 15-bit cluster number PS5-PS19 in at least one of the 32-bit physical sector numbers PS0-PS31 in the data track and a bit of value 1 (put into shift register position S15) are preset as the initial value for the scrambling by the random sequence.

The above-noted features are now clarified in the independent claims and are believed to clearly distinguish over the applied art.

The outstanding rejection cites Sako to disclose that main data and linking data are scrambled by a random sequence by an identical system, specifically citing Sako at column 7, lines 51-57, Figure 1, and column 4, lines 27-32.¹ However, in response to that grounds for rejection applicant respectfully submits Sako does not disclose or suggest the features now clarified in the independent claims.

In Figures 4 and 6 Sako discloses utilizing a shift register 14a to perform a scrambling operation. However, Sako does not disclose or suggest the specific features now clarified in the claims with respect to the scrambled data, and specifically Sako does not disclose or suggest “generating the 8-bit scrambling bytes by taking initial 8-bits in the shift register as a first scrambling byte and performing an 8-bit shift to generate subsequent scrambling bytes from the initial 8-bits of the shift register”. Sako also fails to disclose or suggest “wherein the 15-bit cluster number in at least one of the 32-bit physical sector numbers in the data track and a bit of value 1 is preset as the initial value when said main data and linking data are scrambled by the random sequence”. Thereby, Sako does not disclose or suggest the features now clarified in the claims with respect to the scrambled data placed on the disk.

¹ Office Action of September 12, 2007 bottom of page 2.

The outstanding Office Action additionally recognized neither Heemskerk nor Sako disclose utilizing a cluster number as an initial value when data is scrambled. To overcome those deficiencies in Heemskerk and Sako the outstanding Office Action cites Suzuki at column 3, lines 66-67 through column 24, line 6.²

In reply to that grounds for rejection applicant first note Suzuki first does not cure the above-noted deficiencies of Heemskerk and Sako. Further, Suzuki is also deficient in neither disclosing nor suggesting “a 15-bit cluster number in at least one of the 32-bit physical sector numbers in the data track and the bit of value 1 is preset as the initial value when said main data and said linking data are scrambled by a random sequence”. Suzuki merely broadly indicates a cluster address of any ADIP address may be used as a seed of a random number,³ but Suzuki does not disclose or suggest the above-noted specific features now clarified in each of the independent claims.

Moreover, no teachings in Kobayashi are believed to cure the above-noted deficiencies of Heemskerk in view of Sako and Suzuki.

In view of the present response, applicant respectfully submits the claims as currently written distinguish over the applied art.

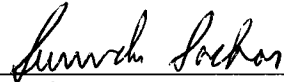
² Office Action of September 12, 2007, page 3, first full paragraph.

³ Suzuki at column 24, lines 3-6.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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